

CLAIMS

1. A copolymer for the use in or as polymeric binder in intumescent coatings, comprising a blend of a Newtonian copolymer and of a reticulated copolymer, said Newtonian and reticulated copolymers consisting of substituted styrene and substituted acrylate and comprising at least p-methylstyrene (PMS) and 2-ethylhexylacrylate (2EHA).
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- 10 2. A copolymer according to claim 1 wherein the reticulated copolymer is chosen from the group comprising the thixotropic copolymers and the pseudo-plastic copolymers.
- 15 3. A copolymer according to anyone of claim 1 and 2 wherein the ratio of p-methylstyren and 2EHA is of 100/0 to 50/50, preferably of 90/10, preferably of 80/20 and more preferably of 75/25.
- 20 4. A copolymer according to anyone of claim 1 to 3 further comprising p-tert-butylstyrene (PTBS) and/or isobutylmethacrylate (IBMA).
- 25 5. A copolymer according to anyone of claim 1 to 4 wherein the copolymers of the blend are obtained by emulsion polymerisation.
6. An intumescent coating comprising a copolymer according to anyone of claim 1 to 5.

7. An intumescent coating according to claim 6 further comprising foam-forming substances, carbon forming substances and other conventional additives.

5 8. An intumescent coating according to claim 7 wherein the foam-forming substance is an ammonium salt of phosphoric acid, the carbon forming substance is chosen in the group comprising pentaerythritol, dipentaerythritol, tripentaerythritol and polycondensate
10 of pentaerythritol

9. An intumescent coating according to anyone of claims 6 to 8 which is water based or solvent based.

15 10. A method for forming an intumescent coating according to anyone of claims 6 to 9 comprising the step of (a) dissolving the Newtonian and/or the reticulated copolymers in the solvent or in water, (b) optionally adding the chlorinated paraffin, (c) homogenizing the
20 mixture and adding the additives.